

Acute coronary syndrome

Paramedic case studies #3

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Past history

You are attending a 50 year old man who has been relatively healthy. He has been told by his doctor that he has high cholesterol and has a family history of AMI at a younger age including his father and a brother.

Today

He has had a sudden onset today of severe anterior chest pain about two hours ago. Since then he has vomited once and is feeling dizzy worsened by sitting up. He has now laid down in bed. His wife is very concerned and called for ambulance help.

On examination

CNS drowsy, eyes open to voice (3) verbal response oriented (5) motor function (6)
CVS pale cool clammy P=120 BP=60/40
Resp 16 not c/o SOB, nil dyspnoea evident, on ausc chest clear L=R
Chest c/o aching heaviness feeling across his anterior chest, not changed by position, movement or deep inspiration
GIT c/o nausea, vomited again during assessment
ECG sinus tachy
Pulse oximetry 90%

Working assessment

Acute coronary syndrome, Hypotensive suspected cardiogenic shock

Management

Discuss cardiac causes of hypotension. Consider cardiac and non cardiac i.e. pump versus volume or vascular causes. Consider right ventricle causes (inferior MI) left ventricle (anterior MI). Revisit the case study to explore what presentation changes would be required to make this not cardiac such as sepsis, anaphylaxis, haemorrhage. What makes it cardiac?
Patient position – supine as long as there is no suspicion of LVF such as SOB, crackles
Oxygen – related to pulse oximetry so how much
Aspirin – reasons why? When not to? What if already on daily maintenance dose?
Nitrates – reasons why not? hypotension
Opioids – what risks are there? When is it needed? i.e. is pain severe enough
Perfusion – cardiac output = heart rate x stroke volume. If CO is inadequate, HR must be first made normal if bradycardia or SVT/VT. Otherwise increase stroke volume. Can use small fluid bolus to challenge right ventricle or adrenaline for inotrope.
12 lead ECG – prehospital role in early notification
Scene time – minimal with need for definitive therapy including PCI or thrombolysis and intensive care so destination is important

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